PROFESSIONAL DIGITAL TWO-WAY RADIO SYSTEM

MOTOTRBO™
DP 3600/DP 3601
MPT1327 FOR PORTABLE RADIOS
USER GUIDE

Authorized Communication Solution Provider
H.E.R.T.Z Elektronik GmbH
Strausberger Straße 8h (Pappelhain)
15378 Rüdersdorf bei Berlin (OT Herzfelde)
Telefon: 033434 766-0
Fax: 033434 766-76
E-Mail: info@hertz-elektronik.de
Internet: www.hertz-elektronik.de

Contents

This User Guide covers only the functional operation of the **MPT1327 Generic Option Board (GOB)** installed in MOTOTRBO DP Series Portables.

Important Safety Information iii
Product Safety and RF Exposure Compliance . . . iii
Software Version iii
Option Board Part Number iii
Computer Software Copyrights iv
Getting Started 1
How to Use This User Guide 1
What Your Dealer/System Administrator Can Tell You 1
Additional Performance Enhancement 2
Preparing Your Radio for Use 2
Charging the Battery 2
Attaching the Battery 3
Attaching the Antenna 4
Attaching the Belt Clip 4
Attaching the Universal Connector Cover (Dust Cover) 5
Powering Up the Radio 5
Adjusting the Volume 6
Identifying Radio Controls 6
Radio Controls 7
Programmable Buttons 8
Assignable Radio Functions 8
Accessing the Programmed Functions 9
Notes 9
Using the Keypad 10
Identifying Status Indicators 12
Display Icons 12
LED Indicators 14
Audio Tones 14
Indicator Tones 14
MPT Personalities and Radio Zones 15
MPT 15
Talkgroup 15
Fixed and Dynamic Groups 16
Personality Selection 16
Selecting a Personality in Non-MPT Mode 17
Zone Selection 17
Radio Calls 18
Making a Call 18
User Absent 18

Dedicated Calls 19
Manual Dialing 19
Last Number Redial 19
Keypad Edit 20
Contact List 20
Modifying the Contact List 21
To Add an Entry 21
To Delete an Entry 21
To Edit an Entry 21
To Search for an Entry 22
Ending a Call 22
Cancelling a Call 22
Receiving a Call 22
Receiving a Call on an OACSU System 23
Receiving a Call on a FOACSU System 23
Missed Calls 23
Examples of Missed Calls List 24
Call Diversion 25
Special Calls 26
Short Data Messages (SDM) 26
Receiving Short Data Messages 26
Displaying Incoming Data 26
Storing SDMs 26
Interrogating the SDM Calls List 26
Deleting Messages from the Data Calls List 27
Making an SDM Call 28
Status Calls 29
Making a Status Call 29
Receiving a Status Call 30
Emergency Calls 30
Priority Calls 31
Broadcast Calls 31
Call Progress 32
Sending a Call 32
Receiving a Call 33
Cancelling a Call 33
Ending a Call 33

Important Safety Information

Product Safety and RF Exposure Compliance

Before using this product, read the operating instructions for safe usage contained in the Product Safety and RF Exposure booklet enclosed with your radio.

ATTENTION!

This radio is restricted to occupational use only to satisfy FCC/ICNIRP RF energy exposure requirements. Before using this product, read the RF energy awareness information and operating instructions in the Product Safety and RF Exposure booklet enclosed with your radio (Motorola Publication part number 6864117B25) to ensure compliance with RF energy exposure limits.

For a list of Motorola-approved antennas, batteries, and other accessories, visit the following website:

http://www.motorola.com/governmentandenterprise

Software Version

All the features described in the following sections are supported by the radio's software version **R01.08.20** or later.

Check with your dealer or system administrator for more details of all the features supported.

Option Board Part Number

All the features described in the following sections are supported by the radio's MPT1327 Generic Option Board kit number **PMLN5743_S**.

Computer Software Copyrights

The Motorola products described in this manual may include copyrighted Motorola computer programs stored in semiconductor memories or other media. Laws in the United States and other countries preserve for Motorola certain exclusive rights for copyrighted computer programs including, but not limited to, the exclusive right to copy or reproduce in any form the copyrighted computer program. Accordingly, any copyrighted Motorola computer programs contained in the Motorola products described in this manual may not be copied, reproduced, modified, reverse-engineered, or distributed in any manner without the express written permission of Motorola. Furthermore, the purchase of Motorola products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any license under the copyrights, patents or patent applications of Motorola, except for the normal non-exclusive license to use that arises by operation of law in the sale of a product.

The AMBE+2™ voice coding Technology embodied in this product is protected by intellectual property rights including patent rights, copyrights and trade secrets of Digital Voice Systems, Inc.

This voice coding Technology is licensed solely for use within this Communications Equipment. The user of this Technology is explicitly prohibited from attempting to decompile, reverse engineer, or disassemble the Object Code, or in any other way convert the Object Code into a human-readable form.

U.S. Pat. Nos. #5,870,405, #5,826,222, #5,754,974, #5,701,390, #5,715,365, #5,649,050, #5,630,011, #5,581,656, #5,517,511, #5,491,772, #5,247,579, #5,226,084 and #5,195,166.

Getting Started

Take a moment to review the following:

How to Use This User Guide . . . . . page 1
What Your Dealer/System Administrator Can Tell You . page 1
Additional Performance Enhancement . . . . . page 2

How to Use This User Guide

This User Guide covers only the functional operation of the **MPT1327 Generic Option Board (GOB)** installed in MOTOTRBO Portables.

For the complete operation of the MOTOTRBO Portables, refer to the specific User Guides for each radio.

What Your Dealer/System Administrator Can Tell You

You can consult your dealer or system administrator about the following:

- Is your radio programmed with any preset conventional channels?
- Which buttons have been programmed to access other features?
- What optional accessories may suit your needs?

NOTE: Specifications may vary for different radio models. Check with your dealer or system administrator for more information.

Additional Performance Enhancement

The following are some of the latest creations designed to enhnace the security, quality and efficiency of your radio.

Tone Private Line (TPL)

TPL prevents any channel or radio out of MPT system to disturb the transmission in MPT system. TPL code are embedded in the traffic channels to prevent noise when the radio is receiving TPL voice or data signals. To run this feature fully, your MPT base station and radios need to be enabled to receive and transmit TPL signals. Only the radios with TPL feature enabled are able to encode or decode the TPL signal.

Preparing Your Radio for Use

Assemble your radio by following these steps:

Charging the Battery . . . . . page 2
Attaching the Battery . . . . . page 3
Attaching the Antenna . . . . . page 4
Attaching the Belt Clip . . . . . page 4
Attaching the Universal Connector Cover (Dust Cover) . . . . . page 5
Powering Up the Radio . . . . . page 5
Adjusting the Volume . . . . . page 6

Charging the Battery

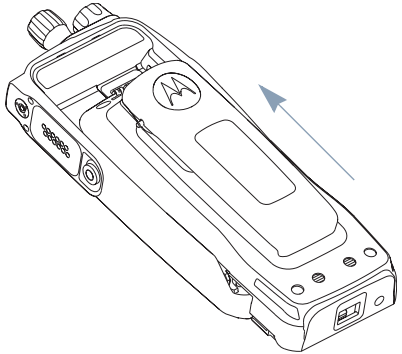
Your radio is powered by a Nickel Metal-Hydride (NiMH) or Lithium-Ion (Li-Ion) battery. To avoid damage and comply with warranty terms, charge the battery using a Motorola charger *exactly* as described in the charger user guide.

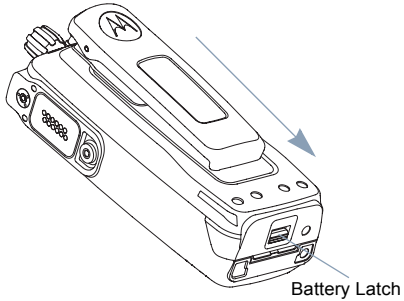
Charge a new battery for 14 to 16 hours before initial use for best performance.

IMPORTANT: **ALWAYS** charge your IMPRES battery with an IMPRES charger for optimized battery life and valuable battery data. IMPRES batteries charged exclusively with IMPRES chargers receive a 6-month capacity warranty extension over the standard Motorola Premium battery warranty duration.

Attaching the Battery

Align the battery with the rails on the back of the radio. Press the battery firmly, and slide upward until the latch snaps into place. Slide battery latch into lock position.

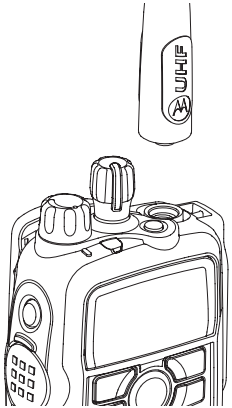




To remove the battery, turn the radio off. Move the battery latch into unlock position and hold, and slide the battery down and off the rails.

Attaching the Antenna

With the radio turned off, set the antenna in its receptacle and turn clockwise.



To remove the antenna, turn the antenna counterclockwise. Make sure you turn off the radio and remove the universal connector cover (dust cover) first.

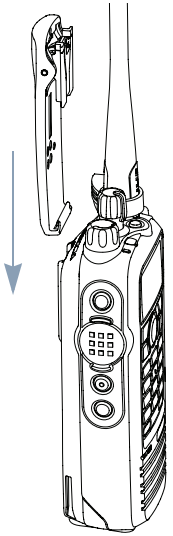
Caution

If antenna needs to be replaced, ensure that only MOTOTRBO antennas are used. Neglecting this damages your radio.

Attaching the Belt Clip

Align the grooves on the clip with those on the battery and press downward until you hear a click.

To remove the clip, press the belt clip tab away from the battery using a key. Then slide the clip upward and away from the radio.



Attaching the Universal Connector Cover (Dust Cover)

The universal connector is located on the antenna side of the radio. It is used to connect MOTOTRBO accessories to the radio.

Place the universal connector cover loop over the attached antenna. Slide it all the way down to the base of the antenna.

Insert the hooked end of the cover into the slots above the universal connector. Press downward on the cover to seat the lower tab properly into the RF connector.

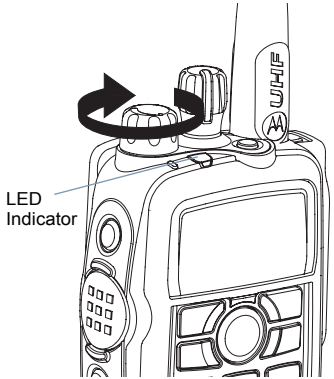
Turn the thumbscrew clockwise to secure the connector cover to the radio.

To remove the universal connector cover, press down on the cover and turn the thumbscrew counterclockwise. Lift the cover up, slide the connector cover loop upwards, and remove it from the attached antenna.

Replace the dust cover when the universal connector is not in use.

Powering Up the Radio

Rotate the **On/Off/Volume Control Knob** clockwise until you hear a click. You see `Motorola` and `MOTOTRBO (TM)` on the radio's display momentarily, followed by `Motorola` once more.



The LED blinks green and the Home screen lights up if the backlight setting is set to turn on automatically.

A brief tone sounds, indicating that the power up test is successful.

If your radio does not power up, check your battery. Make sure that it is charged and properly attached. If your radio still does not power up, contact your dealer.

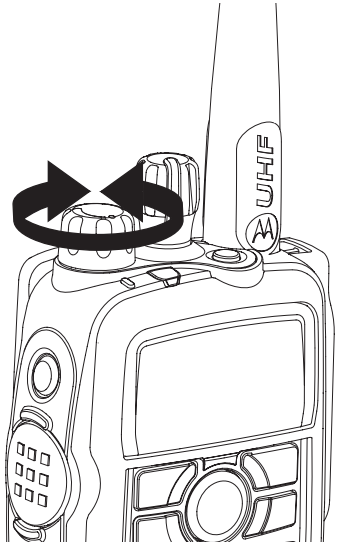
To turn off the radio, rotate this knob counterclockwise until you hear a click. You see a brief Powering Down *on the radio's display.*

Adjusting the Volume

To increase the volume, turn the **On/Off/Volume Control Knob** clockwise.

To decrease the volume, turn this knob counterclockwise.

NOTE: Your radio can be programmed to have a minimum volume offset where the volume level cannot be turned down fully. Check with your dealer or system administrator for more information.

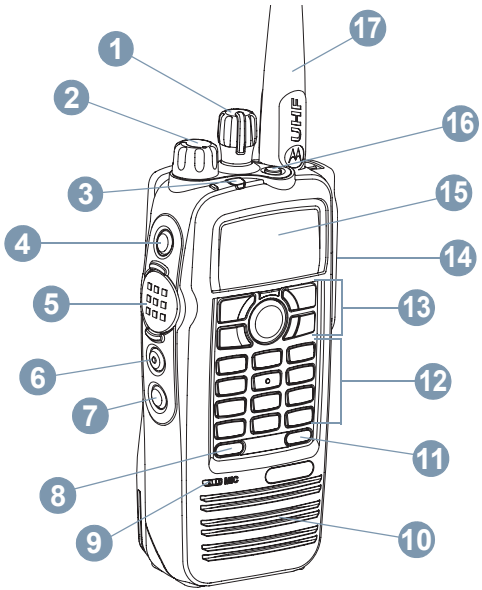


Identifying Radio Controls

Take a moment to review the following:

Radio Controls . . . . . page 7
Programmable Buttons . . . . . page 8
Accessing the Programmed Functions . . . . . page 9
Using the Keypad . . . . . page 10

Radio Controls



1. Channel Selector Knob
2. On/Off/Volume Control Knob
3. LED Indicator
4. Side Button 1*
5. Push-to-Talk (**PTT**) Button
6. Side Button 2*
7. Side Button 3*
8. Front Button P1*
9. Microphone
10. Speaker
11. Front Button P2*
12. Keypad
13. Menu Navigation Keys
14. Universal Connector for Accessories
15. Display
16. Emergency Button*
17. Antenna

** These buttons are programmable.*

Programmable Buttons

The Customer Programming Software (CPS) can program the programmable buttons as shortcuts to **radio functions** or **preset channels/groups** depending on the duration of a button press:

- Short press – Pressing and releasing rapidly (between 0.05 and 0.75 second).
- Long press – Pressing and holding for the programmed duration (between 1.00 second and 3.75 seconds).
- Hold down – Keeping the button pressed.

Assignable Radio Functions

Clear – Allows cancelling an incoming or outgoing call (Only available on Side Button 1)

Dedicated Call/Emergency/Help – To make a call to a pre-determined number, effectively activating an Emergency, Priority, Speech, Status, Data, or a normal call.

Personality – Shortcut to the personality menu option to select one of four MPT personalities (provided by MPT1327) or Conventional Zones (provided by TRBO radio).

User Absent – Shortcut to the User Absent menu.

Missed Calls – Shortcut to the Missed Call menu. This is a list of calls received and stored by the radio when you are unable to take the call.

Status – Shortcut to the Status menu that allows access to the status functionality.

Data – Shortcut to the Data menu that allows access to the data functionality.

Short Data Display Disable – Controls the short data display switch.

Redial Key – Press to show the last called numbers.

Phone Key – Press to make a call, this is the same function as **PTT.**

Help Call – Call the Help number as pre-defined via the CPS.

SFD/Talkgroup Toggling – Press to toggle between SFD and Talkgroup mode.

Accessing the Programmed Functions

You can access various radio functions through one of the following ways:

- A short or long press of the relevant programmable buttons.

OR

- Use the Menu Navigation Buttons as follows:

1. To access the menu, press menu. Press the appropriate **Menu Scroll** button (or) to access the menu functions.
2. To select a function or enter a sub-menu, press OK.
3. To go back one menu level, or to return to the previous screen, press back. Long press back to return to the Home screen.

NOTE: Your radio automatically exits the menu after a period of inactivity and returns to your Home screen.

Notes

Using the Keypad

You can use the 3 x 4 alphanumeric keypad to access your radio's features. You can use the keypad to enter subscriber aliases or IDs, and text messages. Many characters require that you press a key multiple times. The table below shows the number of times a key needs to be pressed to generate the required character.

This table is only applicable for a radio that does <u>not</u> support Simplified Chinese.

	Number of Times Key is Pressed														
Key	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
1 .,?	.	1	?	!	,	@	-	&	:	“	(	)	‘	%	$
2 abc	A	B	C	2	Ä	Å	Á	À	Æ	ß	ç				
3 def	D	E	F	3	É	È	Ê	Ë							
4 ghi	G	H	I	4	Ì	Í									
5 jkl	J	K	L	5											
6 mno	M	N	O	6	Ö	Ó	Ò								
7 pqrs	P	Q	R	S	7										
8 tuv	T	U	V	8	Ü	Ù									
9 wxyz	W	X	Y	Z	9										
0 CAPS	+	-	0	X	*	/	=	>	<	#					
★ DEL	* or del	**NOTE**: Press during edit mode to enter a “*”.													
# ⌴	# or space	**NOTE**: Press during edit mode to confirm input.													

This table is only applicable for a radio that supports Simplified Chinese.

	Number of Times Key is Pressed														
Key	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
1 ,.?	.	1	?	!	,	@	-	&	:	“	(	)	‘	%	$
2 abc	A	B	C	2											
3 def	D	E	F	3											
4 ghi	G	H	I	4											
5 jkl	J	K	L	5											
6 mno	M	N	O	6											
7 pqrs	P	Q	R	S	7										
8 tuv	T	U	V	8											
9 wxyz	W	X	Y	Z	9										
0 CAPS	+	-	0	X	*	/	=	>	<	#					
★ DEL	* or del	**NOTE**: Press during edit mode to enter a “*”.													
# ⌴	# or space	**NOTE**: Press during edit mode to confirm input.													

Identifying Status Indicators

Your radio indicates its operational status through the following:

Display Icons . . . . . page 12
LED Indicators. . . . . page 14
Audio Tones . . . . . page 14
Indicator Tones . . . . . page 14

Display Icons

The full dot matrix, black and white, liquid crystal display (LCD) of your radio shows radio status, text entries, and menu entries.

The following are icons that appear on the radio's display.

Received Signal Strength (RSSI)

The number of bars displayed represents the radio signal strength. Four bars indicate the strongest signal. This icon is only displayed while receiving.

Loudspeaker

Indicates that the loudspeaker is active.

Power Level

L
or
H

Radio is set at Low power.

Radio is set at High power.

Registered

Indicates that Control Channel is acquired.

Repeater/Talkaround

Indicates that background hunt is running.

Scan

Indicates that scanning for a control channel is in progress.

Data Message

Indicates messages in the Data Calls list. Blinks when there are new messages.

Battery Level

Indicates the remaining charge in the battery. Blinks when the battery is low.

Option Board

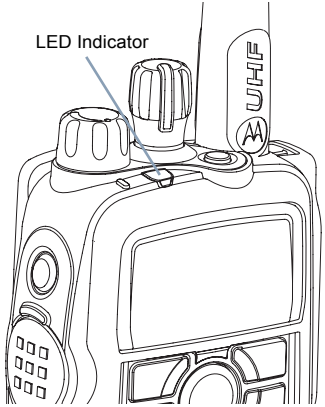
The Option Board is enabled.

Option Board Non-Function

The Option Board is disabled.

LED Indicators

The LED indicator shows the operational status of your radio.



Solid red – Radio is transmitting.

Blinking red – Channels are currently busy.

Blinking green – No service.

Audio Tones

Alert tones provide you with audible indications of the radio's status or the radio's response to data received.

Continuous Tone A monotone sound. Sounds continuously until termination.

Repetitive Tone A single tone that repeats itself until it is terminated by the user.

Momentary Tone Sounds only once for a short period of time defined by the radio.

Indicator Tones

High pitched tone Low pitched tone

Positive Indicator Tone

Negative Indicator Tone

MPT Personalities and Radio Zones

Use this guide to understand the personalities programmed into your radio:

MPT . . . . . page 15
Talkgroup . . . . . page 15
Personality Selection . . . . . page 16
Zone Selection . . . . . page 17

The personalities described below are programmed into your radio by your dealer and are accessible either via the personality button or via the menu.

An MPT personality contains data such as frequencies, display text, alert tones, permitted calls etc. which determines the mode of operation of your radio. Your radio may be programmed with up to 4 different MPT personalities.

MPT

This personality permits the radio to operate in a trunked mode. Incoming and outgoing calls are set up using a defined set of rules or protocol between your radio and a controller in a similar manner to your home telephone.

Talkgroup

Talkgroup is an MPT personality following the same rules or protocol, but is primarily for talkgroup calls. In talkgroup personality, talkgroups are contained in a Talkgroup list, similar to the Contact list, which is scrolled and selected using the Channel Selector Knob. On selection of a talkgroup, you may send and receive calls as described below.

Fixed and Dynamic Groups

These groups form part of the **Talkgroup Personality**, such that when this personality is selected your talkgroup list shows only these groups.

A **fixed** group is a group of users, the address (number) of which is preprogrammed into your radio by your dealer.

A **dynamic** group is a group of users, the address (number) of which is sent to your radio 'over air' at any time via the system controller.

Therefore at any time you may become a member of a dynamic group, able to receive calls and (depending on how your radio is programmed) send calls to that group.

Incoming calls to fixed and dynamic group numbers are detailed in Receiving a Call and displayed under Receiving a Call.

To make an outgoing call to a selected talkgroup, press the **PTT** and speak after the Talk Permit Tone.

Calls are cleared in the normal manner.

If the system is busy, an engaged tone will be heard, release the **PTT** and wait for the Talk Permit Tone. You may then proceed with the call by pressing the **PTT**.

When in Talkgroup personality, you can still make an individual or status call using the keypad or entering the Contact List via the menu. See "Contact List" on page 20.

Personality Selection

The Personality menu provides access to all MPT personalities and radio defined zones. To scroll through the menu, use the navigation buttons (or) as described from step 6 below. Alternatively, you may use the **Channel Selector Knob** instead.

To select a personality via the menu, press the programmed Personality button and proceed to Step 2.

OR

Follow the procedure below.

1. Ensure radio is in IDLE STATE.
2. Press menu to enter Menu Mode.
3. Press or until `Personality`.
4. Press OK to select `Personality`.
5. Display shows current personality e.g. `MPT`
6. Press or until desired personality e.g. `MPT 2`.
7. Press OK to select. The display shows `MPT 2`. The display holds for 2 seconds while the radio re-tunes to the new personality.
   The radio returns to IDLE STATE with display showing `Freetext`.

Selecting a Personality in Non-MPT Mode

To switch from your current zone to MPT mode, use the following procedure to select a personality.

1. Press menu to enter Menu Mode.
2. Press ◄ or ► until `Zone`.
3. Press OK to select `Zone`.
4. Display shows current zone e.g. `Zone 1`.
5. Press ◄ or ► until desired zone with option board enabled e.g. `Zone 2`. Check with your dealer which zone has option board enabled.
6. Press OK to select. The display shows the previously selected personality for 2 seconds while the radio re-tunes to the new personality. The radio returns to IDLE STATE with display showing `Freetext`.

Zone Selection

A zone is a group of channels. Your radio supports up to 250 zones, with a maximum of 16 channels and Capacity Plus personalities per zone.

Use the following procedure to switch from an MPT personality to a zone in non-MPT mode.

Press the programmed Personality button and proceed to Step 2.

OR

Follow the procedure below.

1. Press menu to enter Menu Mode.
2. Press ◄ or ► until `Personality`.
3. Press OK to select `Personality`.
4. Display shows the current MPT personality e.g. `MPT`.
5. Press ◄ or ► until the required zone.
6. Press OK to select.
7. The display shows `<Zone> Selected` momentarily and returns to the selected zone screen.

Radio Calls

Once you understand how your MOTOTRBO Portable is configured, you are ready to use your radio.

Use this navigation guide to familiarize yourself with the basic Call features:

Making a Call . . . . . page 18
Ending a Call. . . . . page 22
Cancelling a Call . . . . . page 22
Receiving a Call . . . . . page 22
Missed Calls . . . . . page 23
Call Diversion . . . . . page 25

Making a Call

The radio is capable of making a variety of calls, including calls to individual radios, groups of radios and calls to private and public telephone systems.

Before you can make a call the radio must be in IDLE STATE, i.e. a personality has been selected and no call is in progress.

The radio can make calls by using the **Dedicated Calls, Manual Dialing or Contact List**.

User Absent

User Absent is a network feature which may be enabled in your radio. With this feature enabled, entry into the user absent mode is automatic and any calls received when you are away from your radio goes into the Missed Calls list automatically and the message “Will call back” sent to the caller.

When you return to your radio, check whether a momentary tone sounds every 10 seconds which indicates that your radio is in user absent mode. Press any button to exit user absent mode and return the radio to IDLE STATE for normal operation.

Dedicated Calls

Dedicated calls can be made from either a preprogrammed button or using the speed-dial feature from the keypad.

Press the Dedicated Call button to make a call to the most commonly used preprogrammed number. The display shows `Calling`.

To use the speed-dial feature, hold down one of the keypad keys (0 to 9) for a preset period to make a call to one of ten (1 of 10) preprogrammed numbers which are the first ten entries (1 to 9, 0= 10) in the contact list. The selected number and alias is displayed and the conversation can go ahead.

Manual Dialing

To make a call from the keypad:

1. Enter Telephone Number (PSTN calls always start with 0, PABX calls start with 6, 7, or 8)
   OR
   Radio ID
   OR
   Group ID
2. Press the **PTT** button or #⌐ to make radio call. The display shows `Calling`.

Last Number Redial

The last number dialed by the radio is stored in the memory of the radio.

Procedure:

Partially entered numbers are also stored. With the radio in IDLE STATE:

1. Press the preprogrammed button (for redial) to redial. The display shows last called Radio ID or Group ID e.g. `1234567`.
2. Press ◄/ to delete. The display shows `123456`.
3. Enter new numbers. The display shows `12345699`.
4. Press the **PTT** button or #⌐ to make the call. The display shows `Calling`.

Last number redial does not function when Talkgroup personality is selected. See “Personality Selection” on page 16.

Keypad Edit

If the radio is displaying a Contact List number, a Keypad Dialed number, Status number or Missed Call number, the last digit may be deleted by:

Procedure:

1. Press menu once. The display shows `1234567`.
2. Long press menu to enter edit mode.
3. Press ◄ to delete. The display shows `123456`.
4. Enter new numbers. The display shows `12345699`.
5. Press the **PTT** button or #⌐ to make radio call. The display shows `Calling`.

NOTE: The edited number is not saved at the end of the call in the contact list, but is saved in the last number redial.

Contact List

When the radio is in IDLE STATE, the contact list may be used which allows access to up to 100 preprogrammed numbers accessed via the menu.

Depending on the way your radio is programmed, the radio displays either the alpha alias (name) or the number to be dialed. One of four tones may be tagged to the preprogrammed numbers, which sounds when the radio receives a call from that number.

The contact list can be entered directly by one click of the Channel Selector Knob when the radio is in IDLE STATE. Use the Channel Selector Knob or the menu navigation buttons to scroll through the list. Then select the required name or number as indicated in step 5 below.

Procedure:

To access the contact list via the menu:

1. Press menu to enter Menu Mode.
2. Press ◄ or ► until `Contact List`.
3. Press OK to select `Contact List`.
4. Press ◄ or ► to scroll the Contact List.
5. Press OK or **PTT** button or #⌐ to make call. The display shows `Calling`.

If a contact list number is selected but no call request is sent, the display is held until a momentary tone sounds and then reverts to the IDLE STATE.

When the number is displayed it may be edited. See “Keypad Edit” on page 20.

Modifying the Contact List

You can modify the Contact List in three ways:

- Add an entry
- Delete an entry
- Edit an existing entry

To Add an Entry

1. Press menu to enter Menu Mode.
2. Press ◄ or ► until `Add Contact`.
3. Press OK to select `Add Contact`. The display shows `Name?`.
4. Enter the contact name. A maximum of 14 characters are allowed, depending on programming.
5. Press OK to store the name. The display shows `Number?`.
6. Enter the number. A maximum of 20 digits are allowed, depending on programming.
7. Press OK to store the number. The display shows `Add Contact`.
8. If you make an error, use the ◄ to delete the last character/digit and ► to create a space.

To Delete an Entry

1. Press menu to enter Menu Mode.
2. Press ◄ or ► until `Delete Contact`.
3. Press OK to select `Delete Contact`. The display shows `Alias 1`.
4. Press ◄ or ► until you see the entry you want to delete. The display shows `Alias 2`.
5. Press OK to select the entry. The display shows `Delete?`.
6. Press OK to delete selected entry. The display returns to `Delete Contact`.

To Edit an Entry

1. Press menu to enter Menu Mode.
2. Press ◄ or ► until `Contact List`.
3. Press OK to select `Contact List`.
4. Press ◄ or ► until you see the entry you want to edit. The display shows `Alias 3`.
5. Press ◄ for 2 seconds to enter Edit Alias Mode when display icon flashes. The display shows `Alias 3`.
6. Edit the alias or delete and enter a new alias. Use ◄ to delete the last character and back to delete entire entry.

7 Press OK to store edited/new alias. The display shows 0123456789.

8 Edit the number or delete and enter a new number. Use ◄ to delete the last digit and back to delete entire entry.

9 Press OK to store edited entry. The display returns to Alias 3.

To Search for an Entry

When in Contact List or Delete Contact menu, search for an alias (name) by entering characters from the keypad.

Procedure:

1 Enter up to 3 characters. The display shows Pol.

2 Press OK to start searching the list. The display shows search results Police.

3 Press *DEL to repeat search using the same search criteria.

4 Press back to cancel search at any time
OR
If search is unsuccessful, the display returns to the Contact List menu prior to search.

NOTE: The search process is not case sensitive.

Ending a Call

1 Press back
OR
press *DEL #⌐. The negative indicator tone sounds and the display shows Call Ended.

See "Ending a Call" on page 33.

Cancelling a Call

1 Press back
OR
press *DEL #⌐. The display shows Cancelling.

See "Cancelling a Call" on page 33.

Receiving a Call

There are two types of systems on which the radio may be used, Off Air Call Set Up (OACSU) and Full Off Air Call Set Up (FOACSU).

If you are in doubt about which system you are operating on, please consult your dealer.

Receiving a Call on an OACSU System

When the radio is called:

1. A repetitive tone sounds. The display shows `Alerted`.
2. A momentary tone sounds. The display shows `Call Type`.

Receiving a Call on a FOACSU System

When the radio is called:

1. The ring tone sounds. The display shows `Alerted`.
2. Press the **PTT** button to accept call (unless in talkgroup personality, when radio unmutes automatically for fixed and dynamic group calls).
3. A repetitive tone sounds. The display shows `Alerted`.
4. When conversation is permitted, a momentary tone sounds. The display shows `Call Type`.

See "Receiving a Call" on page 33 for display Call Type.

NOTE: The system may have a limited call time, indicated on the display, and the call may be terminated automatically if this call time is exceeded; e.g. display shows `01:22`.

Missed Calls

If a call remains unanswered, the call is stored by the radio, provided that missed calls have been programmed into your radio.

Up to five calls can be stored. If the same radio calls more than once the call is only stored once. When five calls have been stored by the radio, the sixth call received may overwrite the first.

When a call has been stored by the radio, a momentary tone sounds every ten seconds and the display shows `Missed Calls`.

At this time, pressing any of the menu buttons provides a quick access into the Missed Calls List.

The Missed Call List can also be entered directly by pressing the Missed Call button (if programmed) when the radio is in the IDLE STATE or via the menu.

If using the Missed Call button, follow the procedures from step 4 below.

To view the calls in the list via the menu:

1. Press menu to enter Menu Mode.
2. Press ◄ or ► until `Missed Calls`.
3. Press OK to select. The display shows `Missed Calls`.

4 First call in list, the display shows `Alpha Alias` or the radio number.

5 Press ◄ or ► to scroll list.

NOTE: In the Missed Calls list some alpha alias/numbers may contain a suffix S that indicates a status message associated with the call.

Examples of Missed Calls List

The display shows `Reception S`,
where S is a status message associated with the call.

1 Press menu, the display shows message e.g. `On Break`.

2 Press menu again, the display shows the status number e.g. `Status 04`.

3 Press menu again, the display shows `Reception S`.

You can call back to any number in the Missed Call list by:

1 Scroll ◄ or ► until `Alias`.

2 Press the **PTT** button or #— to make the call. The display shows `Calling`.

3 After the call is set-up, press **PTT** button and talk with your mouth 2.5-5 cm from the microphone. Release **PTT** to listen.

4 Press back
OR
press *DEL #—. The negative indicator tone sounds and the display shows `Call Ended`.

5 The display then shows `Idle Freetext`.

NOTE: Whilst displaying alias, press menu to display and edit the number.

On a successful call set- up, the entry is automatically deleted with an associated voice message.

Unanswered calls may be deleted from the Missed Call list at any time by pressing back. On deletion of the last message in the Missed Calls list, the radio exits the menu and return to the IDLE STATE.

To exit the Missed Call List:

1 Press back, display shows `Idle Freetext`.

NOTE: The calls are not deleted when the radio is turned off. It is not possible to call back status calls.

Call Diversion

To divert incoming speech calls or status calls:

1. Press [*DEL] [4 ghi] [1 ,.?] from your radio.
2. Press [*DEL] [4 ghi] [4 ghi] from another radio.

To initiate call diversion when the radio is in IDLE STATE:

1. Press [*DEL] [4 ghi] [1 ,.?] [*DEL] to divert all calls
   OR
   Press [*DEL] [4 ghi] [4 ghi] [*DEL]
2. Press [*DEL] [4 ghi] [1 ,.?] [1 ,.?] [*DEL] to divert speech calls only
   OR
   Press [*DEL] [4 ghi] [4 ghi] [1 ,.?] [*DEL]
3. Press [*DEL] [4 ghi] [1 ,.?] [2 abc] [*DEL] to divert status calls only
   OR
   [*DEL] [4 ghi] [4 ghi] [2 abc] [*DEL]
4. Enter ID of radio to which you are diverting to.
5. Press [# ⌙] to complete call diversion.

Examples of Call Diversion

1. To divert all calls **from your** radio to the radio with ID “234”, press [*DEL] [4 ghi] [1 ,.?] [*DEL] [2 abc] [3 def] [4 ghi] [# ⌙].
2. To redirects all calls **from** the radio with ID “234” **to** the radio with ID “432”, press [*DEL] [4 ghi] [4 ghi] [*DEL] [2 abc] [3 def] [4 ghi] [*DEL] [4 ghi] [3 def] [2 abc] [# ⌙].

If a call is made to a radio whose calls are currently being diverted:

A repetitive tone sounds and the display shows `Diverting`.

A call is automatically set up to the radio which is receiving the diverted calls.

To cancel Call Diversion:

1. To cancel call diversion from your radio, press [# ⌙] [4 ghi] [1 ,.?] followed by [1 ,.?] or [2 abc] if necessary and [# ⌙].
2. To cancel call diversion from another radio, press [# ⌙] [4 ghi] [4 ghi] followed by [1 ,.?] or [2 abc] if necessary and [*DEL] “ID (234 in example).”
3. To cancel calls redirected to your radio, press [# ⌙] [4 ghi] [5 jkl] followed by [1 ,.?] or [2 abc] if necessary and [# ⌙].

Special Calls

Use this guide to familiarize yourself with the special call features:

Short Data Messages (SDM) . . . . . page 26
Status Calls . . . . . page 29
Emergency Calls . . . . . page 30
Priority Calls . . . . . page 31
Broadcast Calls . . . . . page 31

Short Data Messages (SDM)

Short data messages may be set up, sent and received using the keypad microphone and controls.

Outgoing data messages from the keypad are limited to alphanumeric data in any combination of up to 20 characters (which include address information and data selection characters).

Receiving Short Data Messages

On receiving a Short Data Message:

1 A momentary tone sounds. The display shows `Data Received`.

The data message icon is lit whenever SDMs are present in the Data Calls list, unless the message display has been turned off. The data message icon flashes when data messages in the Data Calls list are unread. The icon is lit permanently when a message is read and retained in the Data Calls list.

Displaying Incoming Data

The short data message display can be switched ON and OFF using the preprogrammed Data Display button, or via the menu.

The SDM display defaults to ON, however the option setting is retained when the radio is switched off.

Storing SDMs

Incoming SDMs are stored on receipt in the Data Calls list. Up to ten SDMs can be stored by the radio. The data message icon is lit whenever SDMs are in the Data Calls list.

SDMs are not stored when the radio is switched OFF, except for one SDM only which can be saved.

Interrogating the SDM Calls List

When an SDM call has been stored by the radio, the display shows: `Data Received`

With the display showing "Data Received", pressing any of the menu buttons provides a quick access into the Data Calls list.

Procedure:

To view the calls in the list via the menu:

1. Press menu to enter Menu Mode.
2. Press ◄ or ► until `Data Calls`.
3. Press OK to select `Data Calls`.
4. First call in list shows `Alpha Alias` or `Number`.
5. Press ◄ or ► to scroll list. The display shows `Alpha Alias` or `Number`.
6. Press OK or ► to read selected message. The display shows `Call 8116`.
7. Press ► or back to return to the Data Calls list at the end of the message.
8. Press back to retain message in the list and exit from Data Calls list.
9. Press back again to exit from Menu Mode.

To save an SDM to be retained after the radio is switched off.

1. Read the data message in the Data Calls list.
2. Press OK. The display shows `Save?`.
3. Press OK to save selected message.
4. Press back to return to the Data Calls list.

When the radio is switched off and on again the saved SDM will appear in the Data Calls list.

NOTE: You must exit the Data Calls list interrogate mode to put the radio in the IDLE STATE in order to make other calls.

Deleting Messages from the Data Calls List

1. Press back to delete data messages from the Data Calls list or while viewing data messages. The display shows `Delete?`.
2. Press OK (or *DEL #⌐ or back) to delete data message from the Data Calls list.
3. Press back to retain the data message in the Data Calls list.
4. Press *DEL #⌐ to delete the currently selected data message with no display prompt.
5. The radio returns to the Data Calls list interrogate mode after each deletion until the last message is deleted when the display returns to the IDLE STATE and the data message icon ✉ stops flashing.

You can move directly from the Data Calls list to the Missed Calls List by pressing the Missed Calls button. See “Missed Calls” on page 23.

Making an SDM Call

SDM Calls may be initiated in two different ways:

- via the keypad using a **Call modifier**
- via the **Contact List**

NOTE: The maximum data message size is limited to 20 characters which includes address information and data selection characters. Data entered via the data button or call modifier methods may be alphanumeric characters entered from the keypad.

In the contact list method data may consists of alphanumeric characters which are preprogrammed in your radio by your dealer.

To initiate a data call via the **keypad**:

1. [*DEL] [2abc] [*DEL] Part of modifier
2. Enter message from keypad in alphanumeric characters.
3. [*DEL] Final part of modifier
4. Enter called radio address.
5. The display shows `*2*Call Bryan`. Press [◄] or [►] to scroll message. Display shows `ASAP*NNN` where `NNN` is called radio address.
6. Press **PTT** button or [#—] to make a call to the dialed numbers. A repetitive tone sounds. Display shows `Sending Data`.
7. Press [back] or [*DEL] [#—] at any time to delete dialed numbers and return radio to IDLE STATE when a momentary tone sounds.

To initiate a data call via the **contact list**:

In this method data may consist of alphanumeric characters which are pre-programmed into your radio by your dealer.

1. Press [menu] to enter Menu Mode.
2. Press [◄] or [►] until `Contact List`.
3. Press [OK] to select `Contact List`.
4. Press [◄] or [►] until `Alpha Alias`.
   Press [►] to display `Number`.
   Press [►] to display `Ring Tone`.
   Press [►] to return to `Alpha Alias`.
5. Press [OK] or **PTT** button to make radio call. Display shows `Sending Data`.
6. When finished with call, press [back] or [*DEL] [#—]. A momentary tone sounds. Display shows `Call Ended`.

NOTE: The maximum data message size is limited to 20 characters which includes address information and data selection characters.

Status Calls

A status is a code for transmitting prearranged messages, e.g. status “05” may indicate “Return to Base”.

Making a Status Call

Status Calls may be initiated in two different ways:

- via the keypad using a **Call modifier**
- via the **Menu**

To initiate a status call via the **keypad**:

1. [*DEL] [0 CAPS] Part of modifier
2. [0 CAPS] [5 jkl] Example of status digits in range 1-31
3. [*DEL] Final part of modifier
4. Enter called radio address.
5. Display shows `*005*NNNNN` where `NNNNN` is called radio address.

Make the call by:

1. Press the **PTT** button or [#—] to make the call. The display shows `Sending Status`.

To initiate a status call via the **menu**:

1. Press [menu] to enter Menu Mode.
2. Press [◄] or [►] until `Status`.
3. Press [OK] to select `Status`.
4. Press [◄] or [►] until display shows Status Message e.g. `On Break`.
5. Press [menu] until display shows Status Number e.g. `Status 04`.
6. Press [OK] to select. The display shows `Status 04`.
7. The display shows for 10 seconds `Select Contact`.
8. Press [menu] or turn Channel Selector Knob to display current entry in contact list.
9. Press [◄] or [►] until display shows `Alpha Alias` (required name or number).
10. Alternatively, a valid number can be dialed from the keypad, for e.g. `*004*207`
11. Press [OK] or **PTT** button or [#—] to make the call. The display shows `Sending Status`.

NOTE: The [OK] key only functions when you are in the contact list menu option.

Receiving a Status Call

You radio receives a Status Call when:

1 A momentary tone sounds.

2 The display alternates every 2 seconds between:
`Status 04`
OR
`On Break`
AND
`Alias/Number`

where Status Messages “04”/”On Break” are examples.

NOTE: Status number (04) is only displayed if associated message is not programmed into your radio. Alias/ Number is the name or number of the calling radio.

Emergency Calls

An emergency call allows you the highest form of priority calling and normally takes precedence over all other calls.

Your radio can be programmed to give you a one-button quick access to call a particular radio or centre (predefined by your dealer) in emergency situations.

Alternatively, you can dial the number prefixing it with [*DEL] [9WXYZ] [*DEL].

Procedure:
To initiate an emergency call:

1 Press the **Emergency** button
OR
Press [*DEL] [9WXYZ] [*DEL] followed by the radio number and **PTT** or [#].

A repetitive tone sounds and the display shows `Emergency`.

Emergency can be stopped by one of the following:

- Switching the radio **Off** and **On** again.
- The emergency time duration is reached.

NOTE: The emergency time duration is programmed into your radio by your dealer.Your radio may receive an emergency call when:

A repetitive tone **OR** ring tone sounds and the display shows `Emergency`.

Priority Calls

A priority call allows you to gain priority over other users of the system when requesting a call.

Procedure:
To initiate a priority call:

1 Press [*DEL] [8 tuv] [*DEL] followed by the radio number and **PTT** or [# ⌙].
A repetitive tone sounds and the display shows `Priority`.

See “Sending a Call” on page 32.

Broadcast Calls

A broadcast call allows you to make calls to groups of radios. Note that on a broadcast call only the calling radio can talk and there is no indication that any radios in the group have received the call.

Procedure:
To initiate a broadcast call:

1 Press [*DEL] [1 ,.?] [1 ,.?] [*DEL] followed by the radio number and **PTT** or [# ⌙].
A repetitive tone sounds and the display shows `*11*90`.

Call Progress

Use this guide to familiarize yourself with the call progress and call types:

Sending a Call . . . . . page 32
Receiving a Call . . . . . page 33
Cancelling a Call . . . . . page 33
Ending a Call . . . . . page 33

When in operation, your radio monitors each step in setting up a call whether sending or receiving. These steps are displayed to provide you with call progress and indicate call types.

Sending a Call

Display	Description
Calling	Trying to connect call
Priority	Priority call sent, modifier *8* used
Emergency	Emergency call sent, modifier *9* used
Sending Status	Status call sent, modifier *0xx* used (xx is status message number)
Queued	Call queued on system
Diverting	Calls to called unit have been diverted
Unobtainable	Call unobtainable
Unavailable	Unit unavailable
Invalid Number	Unit number invalid
System Busy	System busy, try again
Alerting	Alerting called unit
Engaged	Called unit is busy
Will Call Back	User absent, called unit will call back
Call Failed	Call failed, try again
Timeout	Call request timed out. Check service is available
Scanning	System access lost, try again

Receiving a Call

Display	Description
Alerted	A call is being received on **OACSU**
Alerted	A call is being received on **FOACSU**. Press **PTT** or '#' to accept the call
Emergency	Emergency call being received
Alias/Number	Call from radio in your fleet
Inter-fleet	Call from radio in another fleet
Telephone	Calls from public telephone system
PABX	Calls from private telephone system
Unknown Party	Call identity unknown to the system
Talkgroup NN	Talkgroup call received (NN is list number)
Dynamic NN	Dynamic group call received (may be alias or number – NN)
Group NN	Fixed group call received (NN is list number)
System Wide	Call to all radios in use on the system
Broadcast	Broadcast call received, user reply not permitted
Status XX	Receiving status message (xx is status message number)

Cancelling a Call

Display	Description
Cancelling	Call successfully canceled by user

Ending a Call

Display	Description
Call Ended	Call ended, another call can now be made

MOTOROLA

MOTOROLA, MOTO, MOTOROLA SOLUTIONS and
the Stylized M logo are trademarks or registered trademarks
of Motorola Trademark Holdings, LLC and are used under license.
All other trademarks are the property of their respective owners.
© 2011 Motorola Solutions, Inc. All rights reserved.
June 2011.

www.motorola.com/mototrbo

68012003013-B